RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/ 069,427 A_

Source: _IFW/6_

Date Processed by STIC: _2-1-05_

ENTERED

RAW SEQUENCE LISTING   DATE: 02/01/2005
PATENT APPLICATION: US/10/069,427A   TIME: 11:33:38

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

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 3 <110> APPLICANT: Famodu, Omolayo O.
 4         Kinney, Anthony J.
 7 <120> TITLE OF INVENTION: Genes Encoding Sterol Delta-14 Reductase in Plants
 9 <130> FILE REFERENCE: 2119-4293
11 <140> CURRENT APPLICATION NUMBER: 10/069,427A
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C--> 12 **<141> CURRENT FILING DATE: 2002-02-19**
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14 <150> PRIOR APPLICATION NUMBER: 60/156,820
15 <151> PRIOR FILING DATE: 1999-09-30
17 <160> NUMBER OF SEQ ID NOS: 10
19 <170> SOFTWARE: Microsoft Office 95
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 427
23 <212> TYPE: DNA
24 <213> ORGANISM: Glycine max
26 <220> FEATURE:
27 <221> NAME/KEY: unsure
28 <222> LOCATION: (360)
29 <223> OTHER INFORMATION: n=a,c,g or t
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33 aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg atccattctc 120
34 cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca ctattgctgc 180
35 aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc caagatgggg 240
36 tttgtgtctc ccactgccat atcaaacaga ggacttgagc tgctgtccac aacttttgcc 300
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W--> 37 **ttcagttttc ttgtaaccct gatattgcat ttttccgggt gcaagtcaca aagtaaaggn 360**
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38 tcatcactaa agcctcatct cagtgggaac ctgatacacg attggtggtt tgggaataca 420
39 actaaaa                                                         427
42 <210> SEQ ID NO: 2
43 <211> LENGTH: 126
44 <212> TYPE: PRT
45 <213> ORGANISM: Glycine max
47 <400> SEQUENCE: 2
48 Leu Gln Ala Leu Thr Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly
49  1               5                  10                  15
51 Phe Phe Thr Tyr Leu Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu
52             20                  25                  30
54 Val Pro Gly Val Ala Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys
55         35                  40                  45
57 Asn Gly Leu Leu Ser Leu Leu Leu Val Ala Leu Leu Gly Ile Gly
58       50                  55                  60
60 Ala Lys Met Gly Phe Val Ser Pro Thr Ala Ile Ser Asn Arg Gly Leu
61 65                  70                  75                  80
63 Glu Leu Leu Ser Thr Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile
```

```
64                    85              90                   95
66 Leu His Phe Ser Gly Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys
67            100             105              110
69 Pro His Leu Ser Gly Asn Leu Ile His Asp Trp Trp Phe Gly
70         115              120             125
73 <210> SEQ ID NO: 3
74 <211> LENGTH: 667
75 <212> TYPE: DNA
76 <213> ORGANISM: Zea mays
78 <400> SEQUENCE: 3
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80 atctttctta ttggctacct agtgttccga ggagctaaca agcaaaaaca tgtgttcaag 120
81 aaggacccca aagctcctat atggggaaaa cctcccaaag ttgtcggggg aaagctacta 180
82 gcatctggtt actggggcat cgcaaggcac tgcaattatc tcggagacct gctgctagca 240
83 ctttcgttca gcttgccctg tggagtgagt tccgtggtcc catacttcta ccccacgtac 300
84 ctgctcattc tactggtctt gagggaaagg cgcgatgagg cgaggtgctc gcagaagtac 360
85 agggagatct gggcagagta ctgcaagctc gtgccgtgga ggatcctgcc ttatgtgtac 420
86 tgaagagacg gtagaaacca aggcagctca tggccctggg ccagctgtaa accttatttt 480
87 gtttgcccct aaccagttgg tgaatgttga tgtagcactc ggtaaactgt gaccgtgcaa 540
88 acttttgtta ttgttggtcc atacatgttt ggaatcgtga atcagaccgc ctcacttggt 600
89 ggcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 660
90 aaaaaag                                                           667
93 <210> SEQ ID NO: 4
94 <211> LENGTH: 140
95 <212> TYPE: PRT
96 <213> ORGANISM: Zea mays
98 <400> SEQUENCE: 4
99 Pro Arg Val Arg Lys Asn Lys Val Glu Leu Ser Leu Leu Ser Gly Leu
100  1               5                  10                   15
102 Ala Asn Leu Cys Ile Phe Leu Ile Gly Tyr Leu Val Phe Arg Gly Ala
103            20                  25                  30
105 Asn Lys Gln Lys His Val Phe Lys Lys Asp Pro Lys Ala Pro Ile Trp
106          35                  40                  45
108 Gly Lys Pro Pro Lys Val Val Gly Gly Lys Leu Leu Ala Ser Gly Tyr
109      50                  55                  60
111 Trp Gly Ile Ala Arg His Cys Asn Tyr Leu Gly Asp Leu Leu Leu Ala
112 65                  70                  75                  80
114 Leu Ser Phe Ser Leu Pro Cys Gly Val Ser Ser Val Val Pro Tyr Phe
115                  85                  90                  95
117 Tyr Pro Thr Tyr Leu Leu Ile Leu Leu Val Leu Arg Glu Arg Arg Asp
118            100             105              110
120 Glu Ala Arg Cys Ser Gln Lys Tyr Arg Glu Ile Trp Ala Glu Tyr Cys
121          115             120              125
123 Lys Leu Val Pro Trp Arg Ile Leu Pro Tyr Val Tyr
124      130             135              140
126 <210> SEQ ID NO: 5
127 <211> LENGTH: 1631
128 <212> TYPE: DNA
129 <213> ORGANISM: Glycine max
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131 <400> SEQUENCE: 5
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134 tccatcttgg aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg  180
135 atccattctc cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca  240
136 ctattgctgc aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc  300
137 caagatgggt tttgtgtctc ccactgccat atcagacaga ggacttgagc tgctgtccac  360
138 aacttttgcc ttcagttttc ttgtaaccct gatattgcat ttttccggtt gcaagtcaca  420
139 aagtaaaggt tcatcactaa agcctcatct cagtggaaac ctgatacacg attggtggtt  480
140 tggtatacaa ctaaatccac agttcatggg tatcgacctc aaattttct ttgttagagc  540
141 tggaatgatg ggatggctac ttatcaattt atctattctt atgaagagca ttcaagatgg  600
142 tactttgagc cagtcaatga ttctctacca gctattctgt gcactataca tcctggacta  660
143 ttttgtacat gaagagtaca tgacatccac ctgggacata attgcagaga gactgggctt  720
144 catgttggtc tttggagatt tagtgtggat tcctttctct ttcagcatac agggatggtg  780
145 gctcttgatg aacagtgtgg agttaacacc agctgccatt gtagctaatt gctttgtgtt  840
146 cctgattgga tacatggtat ttcgaggagc aaacaagcaa aagcatgtgt tcaaaaagaa  900
147 tccaaaggct cctatctggg gtaagcctcc aaaagtcatt ggtggaaagc tacttgcttc  960
148 tggttattgg ggtattgcta gacactgtaa ttacctaggg gatttgatgc ttgctctctc 1020
149 ctttagctta ccatgtggga taagttcacc aattccatac ttctatccaa tttatcttct 1080
150 tattctgtta atctggagag agagaaggga tgaagctcgt gcgccgaga  agtatagaga 1140
151 gatatgggcc gagtatcgta aacttgttcc atggagaata ttgccttacg tttattagga 1200
152 tgaaaaaaaa aagggcttca ccatgaattc ttcatcttgc cgatgttatt aagcacttcg 1260
153 atgtaaattg gttcttgttc ttgtggtttc aatcttggat cttttcttat tgagccatgt 1320
154 agctgcagga gagtgtttcg agggatttat cttaccatct atatttgtgt atcattatgc 1380
155 tgcagcctgc aggccttcat ttttcaatgg ccaactcttt ttgacttgtt ctatttgttt 1440
156 ttagatgaga atttcatggt caaagctcct aggcttaaaa aaacagtgtc atgttctatg 1500
157 ggaagtgcag gaagcaattc ggggactgca ggaagcaatt gcctttacat tgatatgctc 1560
158 aatggtactt taggcccttt aatgttcttg cttttcattt gtgagttatt attggcccca 1620
159 tttcatttgc a                                                      1631
162 <210> SEQ ID NO: 6
163 <211> LENGTH: 374
164 <212> TYPE: PRT
165 <213> ORGANISM: Glycine max
167 <400> SEQUENCE: 6
168 Met Met Glu Ser His Val Asp Leu Gly Phe Leu Leu Gln Ala Leu Thr
169  1               5                  10                  15
171 Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly Phe Phe Thr Tyr Leu
172             20                  25                  30
174 Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu Val Pro Gly Val Ala
175         35                  40                  45
177 Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys Asn Gly Leu Leu Ser
178     50                  55                  60
180 Leu Leu Leu Leu Val Ala Leu Leu Gly Ile Gly Ala Lys Met Gly Phe
181 65                  70                  75                  80
183 Val Ser Pro Thr Ala Ile Ser Asp Arg Gly Leu Glu Leu Leu Ser Thr
184             85                  90                  95
186 Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile Leu His Phe Ser Gly
187            100                 105                 110
189 Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys Pro His Leu Ser Gly
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190          115                 120                 125
192 Asn Leu Ile His Asp Trp Trp Phe Gly Ile Gln Leu Asn Pro Gln Phe
193      130                 135                 140
195 Met Gly Ile Asp Leu Lys Phe Phe Phe Val Arg Ala Gly Met Met Gly
196 145                 150                 155                 160
198 Trp Leu Leu Ile Asn Leu Ser Ile Leu Met Lys Ser Ile Gln Asp Gly
199                 165                 170                 175
201 Thr Leu Ser Gln Ser Met Ile Leu Tyr Gln Leu Phe Cys Ala Leu Tyr
202                 180                 185                 190
204 Ile Leu Asp Tyr Phe Val His Glu Glu Tyr Met Thr Ser Thr Trp Asp
205          195                 200                 205
207 Ile Ile Ala Glu Arg Leu Gly Phe Met Leu Val Phe Gly Asp Leu Val
208      210                 215                 220
210 Trp Ile Pro Phe Ser Phe Ser Ile Gln Gly Trp Trp Leu Leu Met Asn
211 225                 230                 235                 240
213 Ser Val Glu Leu Thr Pro Ala Ala Ile Val Ala Asn Cys Phe Val Phe
214                 245                 250                 255
216 Leu Ile Gly Tyr Met Val Phe Arg Gly Ala Asn Lys Gln Lys His Val
217                 260                 265                 270
219 Phe Lys Lys Asn Pro Lys Ala Pro Ile Trp Gly Lys Pro Pro Lys Val
220          275                 280                 285
222 Ile Gly Gly Lys Leu Leu Ala Ser Gly Tyr Trp Gly Ile Ala Arg His
223      290                 295                 300
225 Cys Asn Tyr Leu Gly Asp Leu Met Leu Ala Leu Ser Phe Ser Leu Pro
226 305                 310                 315                 320
228 Cys Gly Ile Ser Ser Pro Ile Pro Tyr Phe Tyr Pro Ile Tyr Leu Leu
229                 325                 330                 335
231 Ile Leu Leu Ile Trp Arg Glu Arg Arg Asp Glu Ala Arg Cys Ala Glu
232          340                 345                 350
234 Lys Tyr Arg Glu Ile Trp Ala Glu Tyr Arg Lys Leu Val Pro Trp Arg
235          355                 360                 365
237 Ile Leu Pro Tyr Val Tyr
238      370
243 <210> SEQ ID NO: 7
244 <211> LENGTH: 1364
245 <212> TYPE: DNA
246 <213> ORGANISM: Glycine max
248 <400> SEQUENCE: 7
249 ttcggcacga gtaaaacctc aatcttttac tgaaaagtct caactttgaa ctcactcgaa      60
250 gtgatgatgg agtcacacgt ggatctaggt tttctccttc aagctctcac tccatcttgg     120
251 aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg atccattctc     180
252 cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca ctattgctgc     240
253 aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc caagatgggt     300
254 tttgtgtctc ccactgccat atcagacaga ggacttgagc tgctgtccac aacttttgcc     360
255 ttcagttttc ttgtaaccct gatattgcat ttttccggtt gcaagtcaca aagtaaaggt     420
256 tcatcactaa agcctcatct cagtggaaac ctgatacacg attggtggtt tggtatacaa     480
257 ctaaatccac agttcatggg tatcgacctc aaagctggaa tgatgggatg gctacttatc     540
258 aatttatcta ttcttatgaa gagcattcaa gatggtactt tgagccagtc aatgattctc     600
259 taccagctat tctgtgcact atacatcctg gactattttg tacatgaaga gtacatgaca     660
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RAW SEQUENCE LISTING   DATE: 02/01/2005
PATENT APPLICATION: US/10/069,427A   TIME: 11:33:38

Input Set : A:\Sequence Listing US10069427.txt
Output Set: N:\CRF4\02012005\J069427A.raw

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260 tccacctggg acataattgc agagagactg ggcttcatgt tggtctttgg agatttagtg  720
261 tggattcctt tctctttcag catacaggga tggtggctct tgatgaacag tgtggagtta  780
262 acaccagctg ccattgtagc taattgcttt gtgttcctga ttggatacat ggtatttcga  840
263 ggagcaaaca agcaaaagca tgtgttcaaa aagaatccaa aggctcctat ctggggtaag  900
264 cctccaaaag tcattggtgg aaagctactt gcttctggtt attggggtat tgctagacac  960
265 tgtaattacc taggggattt gatgcttgct ctctccttta gcttaccatg tgggataagt 1020
266 tcaccaattc catacttcta tccaatttat cttcttattc tgttaatctg gagagagaga 1080
267 acggatgaag ctcgttgcgc cgagaagtat agagagatat gggccgagta tcgtaaactt 1140
268 gttccatgga gaatattgcc ttacgtttat taggatgaaa aaaaaaaggg cttcaccatg 1200
269 aattcttcat cttgccgatg ttattaagca cttcgatgta aattggttct tgttcttgtg 1260
270 gtttcaatct tggatctttt cttattgagc catgtagctg caggagagtg tttcgaggga 1320
271 tttatcttac catctatatt tgtgtaaaaa aaaaaaaaaa aaaa               1364
274 <210> SEQ ID NO: 8
275 <211> LENGTH: 369
276 <212> TYPE: PRT
277 <213> ORGANISM: Glycine max
279 <400> SEQUENCE: 8
280 Met Met Glu Ser His Val Asp Leu Gly Phe Leu Leu Gln Ala Leu Thr
281  1               5                  10                  15
283 Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly Phe Phe Thr Tyr Leu
284             20                  25                  30
286 Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu Val Pro Gly Val Ala
287         35                  40                  45
289 Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys Asn Gly Leu Leu Ser
290     50                  55                  60
292 Leu Leu Leu Leu Val Ala Leu Leu Gly Ile Gly Ala Lys Met Gly Phe
293 65                  70                  75                  80
295 Val Ser Pro Thr Ala Ile Ser Asp Arg Gly Leu Glu Leu Leu Ser Thr
296             85                  90                  95
298 Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile Leu His Phe Ser Gly
299            100                 105                 110
301 Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys Pro His Leu Ser Gly
302            115                 120                 125
304 Asn Leu Ile His Asp Trp Trp Phe Gly Ile Gln Leu Asn Pro Gln Phe
305        130                 135                 140
307 Met Gly Ile Asp Leu Lys Ala Gly Met Met Gly Trp Leu Leu Ile Asn
308 145                 150                 155                 160
310 Leu Ser Ile Leu Met Lys Ser Ile Gln Asp Gly Thr Leu Ser Gln Ser
311             165                 170                 175
313 Met Ile Leu Tyr Gln Leu Phe Cys Ala Leu Tyr Ile Leu Asp Tyr Phe
314            180                 185                 190
316 Val His Glu Glu Tyr Met Thr Ser Thr Trp Asp Ile Ile Ala Glu Arg
317        195                 200                 205
319 Leu Gly Phe Met Leu Val Phe Gly Asp Leu Val Trp Ile Pro Phe Ser
320     210                 215                 220
322 Phe Ser Ile Gln Gly Trp Trp Leu Leu Met Asn Ser Val Glu Leu Thr
323 225                 230                 235                 240
325 Pro Ala Ala Ile Val Ala Asn Cys Phe Val Phe Leu Ile Gly Tyr Met
326             245                 250                 255
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RAW SEQUENCE LISTING ERROR SUMMARY　　　DATE: 02/01/2005
PATENT APPLICATION:　US/10/069,427A　　　TIME: 11:33:39

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 360

VERIFICATION SUMMARY   DATE: 02/01/2005
PATENT APPLICATION: **US/10/069,427A**   TIME: 11:33:39

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300